

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:
obtaining a total memory bandwidth available for a time period;
obtaining a plurality of bandwidth requests for the time period for a plurality of isochronous devices;
apportioning at least a portion of the total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices, wherein the power managed profile causes the bandwidth to be apportioned amongst the requests based at least on interrupt driven asynchronous activity and isochronous data communication, wherein apportioning includes dividing the total memory bandwidth into a plurality of portions of the total memory bandwidth and satisfying at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth by combining data of at least two isochronous data packet transmissions into a combined data packet for transmission.
2. (Previously Presented) The method of claim 1, further comprising:
determining a data transmission policy based on the power managed profile and the plurality of bandwidth requests, the data transmission policy to manage delaying transmission of a first isochronous data transmission and to manage combining data of the first isochronous data packet transmission with data of a second data packet transmission into a combined data packet transmission.
3. (Original) The method of claim 1, wherein obtaining a plurality of bandwidth requests includes polling a plurality of isochronous applications corresponding to the plurality of isochronous devices.
4. (Cancelled)
5. (Previously Presented) A method comprising:
delaying transmission of a first isochronous data transmission having media data to be transmitted to or from a first isochronous device;

appending the first isochronous data packet transmission with a second isochronous data packet transmission having media data to be transmitted to or from the first isochronous device into a combined data packet transmission, wherein appending is performed according to a data transmission policy; and

selecting a time to transmit the combined data packet transmission, wherein selecting includes selecting between a transmission time of an opportunistic data transmission and a transmission time of a combined isochronous data packet transmission.

6. (Previously Presented) The method of claim 5, further comprising:

identifying a plurality of transmission time periods during which to transmit a plurality of combined isochronous data packet transmissions, each combined isochronous data packet transmission having media data from at least two isochronous data packet transmissions.

7. (Canceled)

8. (Previously Presented) The method of claim 6, wherein the opportunistic data packet transmission comprises one of an asynchronous data transmission and a third isochronous data packet transmission.

9. (Previously Presented) The method of claim 5, wherein the data transmission policy reduces a first frequency of transmission times related to transmitting the first isochronous data packet transmission to a less frequent second frequency of transmission times related to transmitting the combined data packet transmission.

10. (Previously Presented) The method of claim 5, further comprising:

one of reading media data packet of the combined data packet transmission from a memory and writing media data of the combined data packet transmission to a memory.

11. (Previously Presented) The method of claim 5, further comprising:

delaying transmission of the second isochronous data packet transmission.

12. (Previously Presented) The method of claim 5, further comprising:

transmitting the combined data packet transmission prior to expiration of a time delay compliance limit.

13. (Currently Amended) A device comprising:

a bandwidth manager configured to apportion at least a portion of a total memory bandwidth available for a time period, amongst a plurality of bandwidth requests for the time period for a plurality of isochronous devices, according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices, wherein the power managed profile causes the bandwidth to be apportioned amongst the requests based at least on interrupt driven asynchronous activity and isochronous data communication, wherein apportioning includes dividing the total memory bandwidth into a plurality of portions of the total memory bandwidth and satisfying at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth by combining data of at least two isochronous data packet transmissions into a combined data packet for transmission.

14. (Original) The device of claim 13, wherein the bandwidth manager is coupled to the plurality of isochronous devices to manage data communication between the plurality of isochronous devices and a memory.

15. (Original) The device of claim 14, wherein a duration of the time period depends on a status of a processor.

16. (Original) The device of claim 14, wherein the plurality of isochronous devices are related to the plurality of isochronous applications run by a processor, and wherein the data rate requirements are associated with a plurality of time delay compliance limits for the plurality of isochronous devices.

17. (Previously Presented) A device comprising:

a data transmission manager configured to delay transmission of a first isochronous data packet transmission having media data to be transmitted to or from a first isochronous device, and to append the first isochronous data packet transmission with a second isochronous data packet transmission having media data to be transmitted to or from the first isochronous device into a combined data packet transmission, wherein appending is performed according to a data transmission policy; and

selecting a time to transmit the combined data packet transmission, wherein selecting includes selecting between a transmission time of an opportunistic data transmission and a transmission time of a combined isochronous data packet transmission.

18. (Original) The device of claim 17, wherein the data transmission policy identifies a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, and selects a time to transmit the combined data transmission between one of a transmission time of an asynchronous data transmission, a third isochronous data transmission, and a transmission time of one of the plurality of combined isochronous data transmissions.

19. (Original) The device of claim 18, wherein the third isochronous data transmission is to be transmitted to or from a second isochronous device.

20. (Original) The device of claim 17, further comprising:
one of a processor and a data bus coupled to a memory, wherein the combined data transmission is read from or written to the memory via the processor or the data bus.

21. (Original) The device of claim 17, wherein the media data of the first and second isochronous data transmission include one of digital audio data and digital video data.

22. (Currently Amended) An article of manufacture comprising:
a machine-readable medium having data therein which when accessed by a processor causes a bandwidth manager to obtain a total memory bandwidth available for a time period, obtain a plurality of bandwidth requests for the time period for a plurality of isochronous devices, ~~and~~ apportion the at least a portion of a total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices, and divide the total memory bandwidth into a plurality of portions of the total memory bandwidth and to satisfy at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth by combining data of at least two isochronous data packet transmissions into a combined data packet for transmission, wherein the power managed profile causes the

bandwidth to be apportioned amongst the requests based at least on interrupt driven asynchronous activity and isochronous data communication.

23. (Original) The article of manufacture of claim 22, further comprising:

data to cause the bandwidth manager to determine a data transmission policy based on the power managed profile and the plurality of bandwidth requests, the data transmission policy to delay transmission of a first isochronous data transmission and to combine data of the first isochronous data transmission with data of a second data transmission into a combined data transmission.

24. (Cancelled)

25. (Previously Presented) An article of manufacture comprising:

a machine-readable medium having data therein which when accessed by a processor causes a data transmission manager to delay transmission of a first isochronous data transmission having media data to be transmitted to or from a first isochronous device, and to append the first isochronous data transmission with a second isochronous data transmission having media data to be transmitted to or from the first isochronous device into a combined data transmission, wherein appending is performed according to a data transmission policy; and

selecting a time to transmit the combined data transmission, wherein selecting includes selecting between a transmission time of an opportunistic data transmission and a transmission time of a combined isochronous data transmission.

26. (Original) The article of manufacture of claim 25, further comprising:

data to cause the data transmission manager to identify a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, each combined isochronous data transmission having media data from at least two isochronous data transmissions.

27. (Original) The article of manufacture of claim 26, further comprising:

data to cause the data transmission manager to transmit an opportunistic data transmission prior to expiration of a transmission time period, the opportunistic data transmission having media data from at least two isochronous data transmissions.

28. (Currently Amended) A system comprising:

a bandwidth manager to obtain a total memory bandwidth available from a memory for a time period, obtain a plurality of bandwidth requests for the time period for a plurality of isochronous devices, and apportion the at least a portion of the total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile, wherein the power managed profile causes the bandwidth to be apportioned amongst the requests based at least on interrupt driven asynchronous activity and isochronous data communication;

a data transmission manager to delay transmission of a first isochronous data packet transmission having media data to be transmitted to or from a first of the isochronous devices, and append the first isochronous data packet transmission with a second isochronous data packet transmission having media data to be transmitted to or from the first isochronous device into a combined data packet transmission according to a data transmission policy, a data bus coupled between the memory and the plurality of isochronous devices, wherein the combined data packet transmission is read from or written to the memory via the data bus, wherein apportioning includes dividing the total memory bandwidth into a plurality of portions of the total memory bandwidth and satisfying at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth by combining data of at least two isochronous data packet transmissions into a combined data packet for transmission.

29. (Original) The system of claim 28, wherein the data transmission policy further:

identifies a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, and selects a time to transmit the combined data transmission between one of a transmission time of an asynchronous data transmission, a third isochronous data transmission, and a transmission time of one of the plurality of combined isochronous data transmissions.

30. (Original) The system of claim 29, wherein the data transmission policy further:

transmits an opportunistic data transmission prior to expiration of a transmission time period, the opportunistic data transmission having media data from at least two isochronous data transmissions.

31. (Previously Presented) The method of claim 1, wherein the power managed profile is based on maximizing the life of a battery of a computer.

32. (Previously Presented) The method of claim 1, wherein the power managed profile is based on power usage policy for a processor, RAM memory, hard drive, processor logic, memory controller, chipset logic and data bus use.

33. (Previously Presented) The method of claim 1, wherein the power managed profile apportions the bandwidth based on a balance between a total power available and a minimum bandwidth requirement of individual entities submitting the requests and including the isochronous devices.

34. (Currently Amended) The method of claim 2 further comprising:
the data transmission policy to manage delaying transmission of a third and of a fourth isochronous data packet transmission, and to manage combining data of the third and fourth isochronous data packet transmissions with data of an asynchronous data packet transmission into the combined data packet for transmission.

35. (New) The method of claim 5 wherein appending further comprises:
appending an asynchronous data packet transmission with the first and second isochronous data packet transmissions to form the combined data packet transmission into the combined data packet for transmission.

36. (New) The article of manufacture of claim 23, further comprising:
data to cause the bandwidth manager to delay transmission of a third and of a fourth isochronous data packet transmission, and combine data of the third and fourth isochronous data packet transmissions with data of an asynchronous data packet transmission into the combined data packet for transmission.